DOCUMENT RESUME

ED 237 027 HE 016 805

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TITLE College Curriculum: Shape, Influence, and Assessment. Background Briefing Paper for a Special Panel of The National Commission on Excellence in Education (Kingston, Rhode Island, August 27-28, 1982).
INSTITUTION National Commission on Excellence in Education (ED), Washington, DC.
PUB DATE Aug 82
NOTE 13p.; For a related document, see HE 016 806.
PUB TYPE Reports - Descriptive (141) -- Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Standards; *Articulation (Education); College Credits; *College Curriculum; College School Cooperation; *Degree Requirements; Educational Quality; *Educational Technology; Postsecondary Education; Secondary Education; Student Characteristics; *Student Evaluation; Teaching Methods
IDENTIFIERS Blue Ribbon Commissions; *Excellence; National Commission on Excellence in Education

ABSTRACT

Issues concerning the influence of college curricula are considered as part of a background briefing paper for a special panel of the National Commission on Excellence in Education. The objective was to examine features of contemporary college studies to determine what should be protected or changed to improve the quality of postsecondary education. Attention is directed to the following concerns: (1) the shape of college curricula as reflected in program and degree requirements, the ways in which content is delivered to students, and the grounds for credentials; (2) the influence of college curriculum on secondary schools and secondary school students; and (3) the assessment of the effects of curriculum requirements and delivery on what college students learn. Specific issues include: the influence of the changing student constituency; modes of teaching and learning; the potential and limitations of educational technology; the value of various new forms of assessment, particularly "value-added"; factors accounting for the proliferation of courses and degree programs; whether personal improvement courses should be credited toward baccalaureate degrees; whether class contact hours is a justifiable criterion; and whether there are regional variations in college exit standards. A list of papers commissioned for the panel is included. (SW)

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ED237027

COLLEGE CURRICULUM: SHAPE, INFLUENCE, AND ASSESSMENT

Background Briefing Paper for a Special Panel of
The National Commission on Excellence in Education

The University of Rhode Island; Kingston, R.I.
August 27 and 28, 1982

[Clifford Adelman]

This particular panel is the last of three public discussions of the Commission to focus largely on Higher Education. While the intent of a previous public hearing on the topic of "College Admissions and the Transition to Postsecondary Education" was to have a similar emphasis, the preponderance of comments and testimony received at that hearing concerned secondary schools, the preparation of secondary school students for college, and the condition of entering college freshmen. Likewise, the discussion at a previous panel on "Performance Expectations in American Education" focused more on the junctures between secondary and postsecondary education and postsecondary education and work than on what happens between those junctures.

This panel discussion will thus make a concerted effort to fill in the gaps.

In its inquiry into the condition of of American education, the Commission views colleges and universities as more than institutions responsible for the training of elementary and secondary school teachers, as possessing more functions than that of admitting students, and as more than testing grounds for hypotheses concerning the success or failure of previous schooling.

The nation's 3200+ community colleges, colleges, and universities are attended by nearly 12 million students. Roughly half of the current traditional college age cohort (18-24) will spend at least one year pursuing a course of study in institutions of postsecondary education, and nearly 30% will complete degree programs within seven years of matriculation.

These are no mean numbers. Higher education, once reserved for the elite, has become an organic part of the continuum of American education and is considered a significant portion of the American dream for millions. More than that, the quality of higher education has been recognized as essential to the nation's economy, workforce, competitive position in a shrinking world, and quality of life. It is the level of the educational system at which national development is most closely related to schooling.

Whether our future citizenry is technologically and internationally literate; whether our future technicians and statesmen are culturally literate--these potentials are determined, finally, at no other level of education.

If excellence in education is to be defined, part, in terms of open-ended levels of achievement, i.e. the notion that learning never ends, higher education offers the only embodiment of that portion of the definition of

excellence in our educational system. The limits of what it can teach never cease expanding--whether in history or chemistry, nursing or engineering. Its principal goal--imparting a knowledge of how to learn--is designed for the life-long pursuit of knowledge.

Indeed, this definition of excellence in education as a lifelong undertaking perhaps accounts for the increasing presence of "older" students in American colleges and universities, for the phenomenon of recurrent education, and for the parallel growth of education and training offered by corporations and public agencies to their employees. But it may be an unhappy paradox that this definition of excellence as expanding with the frontiers of knowledge has also yielded an accelerating specialization and proliferation of courses and degree programs that atomize learning.

This atomization, observed by many over the past two decades, may be further compounded by the basic time-driven accounting system that colleges and universities use as the grounds of awarding credentials and degrees. Students scramble for credits, seek to accumulate and concentrate chits that are assumed to be a negotiable currency when they enter working life. The more our culture values early success in worklife, the more uncertain our economy, the more expensive higher education becomes and the less student financial aid that is available, the more intensely will students understandably seek to accumulate and concentrate the maximum number of these chits in the minimum amount of time. It has become increasingly apparent to many critics and observers of the system that learning has thus taken a back seat to displays of credits and that the baccalaureate degree--and the associate's degree--may not be as valuable currencies as they once were.

There is a thesis that holds that the tone of American education at all levels, the aspirations of students, and the expectations of the society are set by what the highest level of the educational system does and expects. Contrary to occasionally fashionable opinion, Americans respect learned men and women, and admire those who have mastered "the highest forms of knowledge." Thus, when higher education expects less than "higher," when the credit and credentialling chase supercedes real learning, the effects filter down through the system.

It was with this thesis in mind, in part, that the Secretary of Education wisely asked the Commission to examine college curriculum and exit standards, in terms of both their influence on college students and in terms of their impact on other levels of the continuum of education in the United States.

This panel discussion is designed as a response to the Secretary's request.

Issues to be Explored

The subject of undergraduate curriculum is extraordinarily complex and has been written about extensively. By no means does the Commission intend to review the entire field. Rather, it is interested in exploring some critical issues that either fit or compliment the themes that have emerged in the course of its work to date. These issues fall into three major categories:

- o the shape of college curriculum as reflected in program and degree requirements, the ways in which content is delivered to students, and the grounds of credentials;

- o the influence of college curriculum on secondary schools and secondary school students;

- o the assessment of the effects of curriculum, requirements, and delivery on what college students learn.

The Commission's objective is to examine a number of features of contemporary college curriculum to determine which should be protected and which might be altered to improve the quality of postsecondary education. In the process, it hopes to arrive at some practical recommendations to consider for framing in its final report.

These features and issues are introduced below with questions designed to provoke discussion. In each case, the major conceptual categories of shape, influence and/or assessment play a significant role in the presentation of the questions.

COURSES AND DEGREES: THE EFFECTS OF PROLIFERATION

Postsecondary institutions deliver and certify knowledge through the structures of courses and programs (course sequences or clusters). Exit standards are usually stated in terms of courses and programs. It might thus be wise to begin by asking what these structures are, who plays what roles in them, and how they can be rendered more effective in terms of student learning. While some of the questions that might arise in this discussion may seem very basic, they are driven by the perceived influence of postsecondary curriculum on secondary education, and include:

1) The "course" is the basic unit of instruction in higher education (and secondary education as well). What effects does thinking of education in terms of these units called courses have on student motivation and learning? How and why do new courses come into being in different educational settings? How have we historically determined where courses begin and end? When college faculty are asked what students should learn in specific courses, what do they tend to cite: content? processes? generic skills? Do their answers differ by discipline? by level of presumed "difficulty"? by breadth of subject matter? What do students think "courses" are?

2) Many colleges carry on their books a bewildering number and variety of courses, a number that may far exceed the capacity of their faculty to deliver in any one academic year. Granted that all these courses may not be offered or may be offered in alternate years. But why do colleges list such vast numbers? What accounts for the proliferation of courses? What messages does that listing convey to students, and how adequate is the advisement system for students in choosing among this plethora? Is there any evidence to suggest that the perceived proliferation of courses on the secondary school level is the result of proliferation in higher

education?

3) The "major" degree program provides both definition to the undergraduate course of study and academic identity for students. But the question has arisen as to why colleges have multiplied the number of degrees and degree programs in a manner similar to the proliferation of courses. How do high school students or college freshmen evaluate what it means to enter a degree program in Medical Records Administration or Energy Management, for example? Can these students make decisions that are so fine-tuned in terms of courses of study? Or are such degree programs more appropriate for older students? Is there any special case to be made for the proliferation of programs in community colleges?

4) How can discrete tasks within college-level courses in whatever subject develop higher order thinking skills? What tasks would you recommend to develop students' integrative/synthetic thinking abilities, for example? Could those tasks be included in lower division courses in General Chemistry, Introductory Accounting, or Developmental Psychology, for example? Or are they more appropriate to upper-division courses?

THE ACCOUNTING SYSTEM AND THE GREAT CREDIT CHASE

In order to render negotiable the diversity of educational experiences in a diversity of institutions of postsecondary education, an informal consensus on a system of accounting has arisen over the decades. This system is based on the concept of the credit which, in turn, is often time-driven (in many colleges, for example, it is known as the "credit hour"). So fundamental is the credit system of accounting that it determines tuition rates, formula funding, faculty work loads, and a host of other features of organizational control that may be far removed from the business of learning. In searching for ways to improve education the question has arisen over and over again whether time or attainment should be the grounds of educational credentials. The discussion of the credit accounting system is part of that consideration, and may include such questions as:

1) How did the credit-hour system arise in American higher education? Is it absolutely essential to organizational functioning?

2) A major state university offers the following courses (a selection from among many similar items):

Basic Nature Photography	3 credits
Beginning Shorthand	4 credits
Family Food Management	4 credits
Automobile Ownership	2 credits
Skin and Scuba Diving	2 credits
Hi Fidelity Systems for Music Lovers	3 credits

The credit weightings of these courses are equal to or exceed those for College Algebra, Marine Geology, the History of the American City, Business Ethics, Rural Sociology, Communication Theory, Cost Accounting, Computer Programming, and Neuropsychology.

Are the values reflected in such curriculum data consonant with what we assume a degree from a major state university to mean? To what extent can or should personal improvement courses be credited in our academic accounting system toward baccalaureate degrees? What kinds of institutions might creditably offer these organized learning experiences for additive credit (i.e. counting toward the degree)? for non-additive credit (i.e. not counting toward the degree, but potentially transferrable)? non-credit? Does this example of credit accounting have any influence on high school students' conception of academic work and credentials?

3) The credit accounting system is often based on "classroom contact hours." In light of different kinds of student learning at the postsecondary level, in light of the increased responsibility placed on students for their own learning in college, how justified is this criterion of "class contact hours"? What are the alternatives to that criterion?

TIME IN POSTSECONDARY EDUCATION

The Commission has a particular interest in the use of time in education. On the postsecondary level--and in addition to the credit accounting system-- this interest can be reflected in a number of ways. One can speak of when education occurs and recurs in one's life, and, in one sense, that approach to time in education is very much at the core of the Commission's business. After all, we tend to judge <u>excellence</u> in education in terms of achievement by or before specified ages. We expect students to attain certain credentials <u>on schedule</u>--that schedule being an inherited one and reinforced by compulsory schooling laws, by custom and usage in the professions, and by the practices of many employers. Until the G.I. Bill, colleges did not admit many students over the age of 20. Medical schools still do not like to admit anyone over the age of 30. Given such practices, time may be a more significant element in the consideration of college curriculum and exit standards than some have previously acknowledged, and the following questions might be addressed in the course of discussion:

1) Is it possible--or desirable-- to develop a definition of excellence in education that is <u>not</u> based on attaining credentials according to a fixed and inherited schedule? How would one phrase such a definition?

2) Yet another way to speak of time in postsecondary education is to focus on our traditional division of the academic calendar into semesters, trimesters, or quarters. Secondary school students, on the other hand, are accustomed to blocks of knowledge being presented in the equivalent of semester or year-long units. Should colleges and schools adopt compatible academic calendars? Which mode of dividing the calendar has been found to be most effective

in student learning? Are there any distinctions here by subject matter (e.g. some contend that the quarter system is particularly inapplicable for mastery of scientific subject matter)? Has anyone experimented with academic calendars in terms of what it takes to present a subject? Finally, does time according to the traditional academic calendar drive the depth to which subjects are considered, i.e. are our standards determined by time?

3) Why do college students tend to choose majors at a very point in time in their college careers (indeed--for many--while they are in high school)? Is it to bring the promise of a reward (a job) closer in time? Or is it to establish an academic and personal identity from which to deal with an ambiguous and complex environment? What are the virtues and limitations of early choice of major in terms of the motivations of college students? What differences are there in this regard between community college and four-year college students?

4) The Commission has previously heard two sets of arguments concerning student learning in postsecondary education: (1) that time on task is the greater influence, and (2) that the quality of effort makes the difference regardless of time. What evidence is there that one is more influential than the other? Are the conclusions transferrable to the secondary school level?

EXIT STANDARDS AND REQUIREMENTS

In the Commission's work to date, a distinction has arisen between requirements (i.e. courses students must take, amounts of time to be spent studying a subject) and standards (i.e. levels of proficiency, competence, achievement, etc. as measured in any of a variety of ways). On more than one occasion, the Commission has heard testimony to the effect that college admissions standards are both far less important to student learning and have far less influence on high schools and high school students than do college exit requirements. If that is so, then a number of questions arise, including (but hardly limited to):

1) Readers of college transcripts (let alone high school transcripts) have frequently remarked that "we know what they take, but we don't know what they have learned." At a time of simultaneous contraction and concern with quality, it has been proposed that discrete statements evidencing what a student knows or is able to do are more valuable than transcripts. If that is so, what is the case for standardizing such statements? In light of past experience with competency-based education, what are the limitations?

2) Have there been--historically--any noticeable regional variations in college exit standards? Have the land grant institutions and regional state colleges ever required subjects that could be said to have been determined by the nature of the local economy? Do community colleges do this now?

3) How would changing exit requirements affect current trends in college-going such as delayed entry, protracted term to degree, use of CLEP and similar examinations for credit and placement?

4) It has been documented that undergraduate programs in business administration and related fields tend to attract students with relatively low academic skill levels. At the same time, these fields have grown in popularity for entering freshmen. The Commission has previously heard testimony from corporate managers that the communications and analytic skill levels of their entering employees are in serious need of upgrading, and that corporations spend a great deal of time and money in remedying such deficiencies. What can realistically be done to rectify the situation? Should undergraduate degree programs in business establish differential admissions standards or should they adopt differential (and tougher) exit requirements? What roles can business faculty play in upgrading the quality of education they offer?

THE CHANGING STUDENT CONSTITUENCY

All observers of the changing demographics of higher education have noted that the undergraduate student body in 1980 was older, less white, and more female than it was twenty years earlier, and that the composition of the student body was more likely to increase in those respects in the years ahead. Others have observed that student assumptions about postsecondary education and its place in their lives have changed dramatically over the past two decades. In both cases there is a thesis that holds that the content, delivery, organization and assessment of college curriculum is largely determined by the characteristics of who goes to college. Some of the questions we would expect to arise in a discussion of this thesis include:

1) What assumptions do entering college students hold concerning the relationship between school and home environments? between school and leisure environments? between school and work environments? How have these assumptions changed since World War II? How do they influence academic motivation and achievement?

2) In light of the increasing number of high school graduates from limited English-speaking backgrounds, on what do different kinds of colleges have to focus in order to serve these students adequately: curriculum? different staffing? different methods of testing and assessment once students are in college?

3) How do increasing numbers of adult and foreign students affect college curriculum and enrollment mixes? Do these students have any impact on the nature of General Education programs and exit requirements?

4) What is the plausibility of the contention that because colleges duplicate high school courses in many areas, students think they can always make up gaps in their learning and hence are less serious in high school? What evidence do we have that students know what will be duplicated?

5) In seeking to explain persistence and retention in college, a number of researchers have claimed that the student who is less involved in the social and cultural activities of the institution is more likely to drop out. They have pointed out that for residential students in particular, informal contact with faculty and peers plays a pivotal role in student adjustment to college life. Yet adult, part-time, and commuter students do not have those opportunities. What should colleges do to minimize the chances of attrition for those students?

MODES OF TEACHING AND LEARNING

Over the past decade, college and university faculty have become increasingly conscious of concerns that were once considered beneath them as disciplinary specialists, namely, how college students learn and what modes of teaching best enhance that learning. They have experimented with a number of theories and practices, and the questions one would ask about those experiments include:

1) In discussions of ways to achieve and maintain self-directed learning, it has been implied that learning contracts are highly effective. On the postsecondary level, contracts have been used most extensively with recurrent adult learners and in external degree programs. But what evidence do we have that contract learning in the course of a traditional baccalaureate education for the traditional lock-step age cohort effectively develops true autonomy?

Learning contracts involve a great deal of procedure, and faculty have frequently observed that while lower division college students, in particular, are skilled at imitating procedure, they use process as an avoidance behavior, i.e. it takes the place of learning a subject. Is it possible, then, to minimize procedure and maximize learning through contracts? How?

2) College faculty have observed that entering freshmen evidence a high degree of discomfort with ambiguity in: (1) the scene of education (e.g. settings other than classrooms), (2) roles (e.g. when a professor sets himself/herself up as a resource or co-learner and not as a sole repository of judgment or a mouthpiece for his/her discipline), and (3) knowledge (e.g. theory, models). How do typical college freshmen "manage" such ambiguities? How can the college "classroom" constructively develop tolerance for ambiguity and complexity?

3) The idea of the college faculty member as the Master Learner or Co-Learner has been embodied in a number of educational experiments over the past decade. What are the virtues and limitations of this strategy? How transferrable are these models to the secondary school level? How can we encourage professors and teachers to adopt those roles?

4) Likewise, the idea of the college faculty member as a Mentor has been tried out in recent years. Mentorship is a form of

teaching/learning relationship we associate with graduate and (sometimes) professional education. What does it mean on the undergraduate level? What's the evidence that it works? With what kinds of students? What does the historical evidence suggest concerning its potential?

5) Critics of college and university curriculum have held that specialization and departmentalism are partly a result of the explosion of sponsored research in all areas of colleges and universities since World War II. Yet at the same time, the research paradigm may present students with what many agree to be the highest form of learning--the opportunity to function as an autonomous investigator. What other benefits might the research paradigm offer in teaching and learning? To what extent can different kinds of colleges and universities build this paradigm into the undergraduate curriculum?

6) One of the mainsprings in the discussion of articulation between secondary and postsecondary education is the assumption of an accretive process of knowledge and knowing. How have we traditionally approached and embodied that assumption? How have we recently used cognitive development theories, e.g. Perry, Piaget, Loevenger, etc. to reflect that assumption? How can the developmental theories be brought to bear more effectively on the problem of redundancy in curriculum?

DELIVERY: THE POTENTIAL AND LIMITATIONS OF TECHNOLOGY

Just as knowledge in nearly all disciplines has become dependent on our ability to process, store, and combine information with the assistance of technology, so the delivery of knowledge, particularly in colleges and universities, may become increasingly dependent on technological tools. These modes of delivery pose some fundamental challenges to postsecondary education that may be imperfectly understood, and the questions that might be raised in discussion include:

1) The computer has now become an established means of both teaching and scholarship in at least the scientifically oriented fields. What kinds of colleges can require computer literacy of what kinds of students as a condition of credentials? If colleges adopt computer literacy as an exit requirement, will or should high schools respond by adding computer science courses to their existing curriculum? Is there any evidence that high schools are doing more with computers than colleges, hence pushing the colleges to change?

2) Assuming an increase in the pressure to use computer-assisted instruction and related technologies, colleges and universities are still faced with faculties that are replaced but once in a generation and which are comparatively ignorant of technology and its educational applications. What must institutions and administrations do in this area in the face of such immobility in their work force?

3) Traditional analyses of college curriculum include such topics as capitalization, space, and costs. What are the implications of the increased use of educational technology at the postsecondary level on

such components of curriculum analysis? Will we get more time for more learning of different materials? Lower costs to students? Do we provide faculty incentives to use the technology (the postsecondary counterpart of differential salaries)? Will we experience less or more demand for physical space? Will computer instruction pose credentialling problems? In public institutions, will it affect enrollment- and residence-driven models of funding?

ASSESSMENT: THE BOTTOM LINE

It is said in India that you can't domesticate a tiger by pulling out one claw at a time. It is difficult to change a student's intellectual growth through a single course or a 24-credit program, and yet colleges and universities, their administrations and funders (patrons and legislatures), parents and students all want to offer evidence of the positive impact of curriculum. The Commission, too, has been charged with identifying programs, practices, and approaches that result in students achieving "uncommon success." But what does it mean to assess the outcomes of postsecondary education? How have we historically done so?

What are the virtues and limitations of various new forms of assessment, particularly "Value-Added"? The Commission seeks to learn a great deal about assessment, and some of the questions that might arise in discussion of the topic include:

1) One paradigm of higher education separates assessment from performance in specific courses and, in effect, evaluates students through master examinations. What's the case for such examinations, particularly for degree qualifying exams? In the student's major? In general?

2) There is a line of argument that holds that since the objectives of "lower division curricula" (usually translated as General/Liberal Education) are developmental and their effects lifelong, a test measuring comparatively short-range development is not very meaningful. How valid is such an argument?

3) Commissioners attending this panel discussion have looked at (and in one case, actually scored) two experimental examinations directed at assessing the outcomes of General Education in terms of processes of thinking. How difficult is it to standardize a test that seeks to measure such generic capacities? What aspects of an assessment like the Academic Competences in General Education exam or the COMP are transferrable and usable on the secondary school level?

4) How do assessments based on operant measures of learning in higher education work? To what student constituencies is this type of assessment most valuable?

5) How do the curricular theories based on intellectual, ego, and moral development (Perry, Loevenger, Kohlberg) facilitate the use of value-added assessments in higher education? Are these developmental theories more applicable to what is learned in postsecondary education than in previous schooling?

6) The Commission has heard--and on more than one occasion--that our current tools of assessment rely more on speed and test mechanics than on thoroughness of thought, and that they are therefore not very credible measures of learning. Is there any reasonable chance for changing that state of affairs? Who would have to do what?

7) The outcomes of postsecondary education may be of a number of kinds, individual and organizational, with the two inextricably entwined. For individual students, academic outcomes may be expressed in terms of "generic skills," specific disciplinary knowledge, habits of mind and learning, attitudes, or some combination of these. How does the value-added method approach each of these types of outcomes? What environments and experiences can it identify that seem to have the greatest impact on student learning?

There are more questions here than can possibly be covered in a day-and-a-half, but it is the Commission's intention to delve as deeply into these issues as possible, and to maintain a high degree of specificity and concretion in its discussion. To that end, too, the Commissioners have reviewed the following background material, and will be joined in their seminar discussion by the authors of those papers listed below which were commissioned especially for this occasion:

1) "The Secondary School-College Connection and Other Matters: an Historical Assessment," commissioned paper by Frederick Rudolph, Mark Hopkins Professor of History Emeritus, Williams College;

2) "The Faculty Role in Providing Evidence of Educational Excellence," commissioned paper by Jonathan R. Warren, Educational Testing Service, Berkeley, Calif.;

3) "A Little Light on the Subject: Keeping General and Liberal Education Alive," commissioned paper by Zelda F. Gamson, Center for the Study of Higher Education, the Univeristy of Michigan;

4) "Academic Standards in the American Community College: Trends and Controversies," commissioned paper by Howard B. London, Bridgewater State College, Bridgewater, Mass.;

5) "The Demographic Bases of Postsecondary Curriculum," commissioned paper by Herman Blake, Provost, Oakes College, the University of California at Santa Cruz;

6) "Excellence and Equity in American Education," paper commissioned for the general deliberations of the National Commission on Excellence in Education, by Alexander Astin, UCLA;

7) Sample questions and student responses from the Academic Competences in General Education examination;

8) Excerpts from the Test Batteries of the College Outcomes Measurement Project (COMP).

Other material dealing with (1) a preliminary analysis of high school student course-taking patterns, 1964-1980, (2) a preliminary summary of the Commission's search for notable examples of current efforts to improve the transition from secondary to postsecondary education, and (3) the findings of the Value-Added I and II studies, conducted by Dr. Dean K. Whitla of the Office of Instructional Research and Evaluation at Harvard University, will be presented at the panel discussion itself.

An agenda for this panel meeting is attached.

The agenda was not in the copy received by ERIC.